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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/733,456	12/12/2003	Tatsumi Fujioka	118076	1424

25944 7590 09/01/2006

OLIFF & BERRIDGE, PLC
P.O. BOX 19928
ALEXANDRIA, VA 22320

EXAMINER	
PRESTON, ERIK D	

ART UNIT	PAPER NUMBER
2834	

DATE MAILED: 09/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/733,456	FUJIOKA, TATSUMI	
	Examiner	Art Unit	
	Erik D. Preston	2834	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 June 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16* is/are pending in the application.

4a) Of the above claim(s) *13 and 14* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-12,15 and 16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *12 December 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *4/16/04; 9/15/04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

Applicant's election with traverse of Group I in the reply filed on 6/23/2006 is acknowledged. The traversal is on the ground(s) that the examination of the entire application could be made without serious burden. This is not found persuasive because the method of group I could be used to make another materially different product, such as an electrical connection for something other than a rectifying element, and the rectifying device of group II could be made by another process form that of group I, such as press-fitting the rectifying element into the engaging hole without releasing an excess into the groove, using a rectifying element that has a hardness equal to the hardness of the receiving member, or using a radiation plate that has an engagement hole formed by a drill rather than a punch, and the search for group I would not be require for group II and vice versa.

The requirement is still deemed proper and is therefore made FINAL.

Claims 13 & 14 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected Group II, there being no allowable generic or linking claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1,3,5 & 16 are rejected under 35 U.S.C. 102(b) as being anticipated by Iio (US 4886392 supplied by applicant).

With respect to claim 1, Iio teaches a press-fitting method for press-fitting an inserting member (Fig. 4, #5) into a receiving member (Fig. 4, #8), comprising: Forming an engaging hole (Fig. 4, #15) in the receiving member, forming at least one groove (Fig. 4, #16) in an inner periphery of the receiving member, the inner periphery created by the engaging hole; and press-fitting the inserting member in the engaging hole while releasing an excess into the groove (Col. 4, Lines 45-62).

With respect to claim 3, Iio teaches the method of claim 1, wherein the groove forming step forms a plurality of grooves in a circumferential direction; and the grooves are arranged apart from each other in the direction that the engaging hole is formed (as seen in Fig. 4).

With respect to claim 5, Iio teaches the method of claim 1, wherein the forming step forms a plurality of grooves in the direction that the engaging hole is formed (as seen in Fig. 4).

With respect to claim 16, Iio teaches the method of claim 3, wherein the grooves are formed at a position adjacent to a side from which the inserting member is inserted (as seen in Fig. 4).

Claims 1 & 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Shioya (US 5875953).

With respect to claim 1, Shioya teaches a press-fitting method for press-fitting an inserting member (Fig. 1, #10) into a receiving member (Fig. 1, #12), comprising:

Forming an engaging hole (Fig. 1, #32) in the receiving member, forming at least one groove (as seen in Fig. 10) in an inner periphery of the receiving member, the inner periphery created by the engaging hole; and press-fitting the inserting member in the engaging hole while releasing an excess (the portion of the inserting member that does not fit into the open portion of the receiving member) into the groove (as seen in Fig. 10).

With respect to claim 8, Shioya teaches the method of claim 1, wherein the groove forming step forms a plurality of grooves (one for each rib on the inserting member) so that a root diameter of the receiving member at a bottom of each groove is substantially equal to an outer diameter of the inserting member (as seen in Fig. 10).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 9,10 & 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iio (US 4886392 supplied by applicant).

With respect to claims 9 & 15, Iio teaches the method of claim 1, wherein the inserting member has a hardness higher than a hardness of the receiving member, but it does not explicitly teach that the engaging hole is formed by punching. However, forming holes in materials using a punching process was extremely well known at the time of the invention. It would have been obvious to one of ordinary skill in the art at the

time of the invention to form the engaging hole of Iio using a punching process because punching is one of the most common and cheapest methods of forming holes in rotors. It is noted that either end of the receiving member could be considered to be adjacent to the sheared surface.

With respect to claim 10, Iio teaches the method of claim 9, but it does not teach that the inserting member and the receiving member are made of copper. However, copper was extremely well known at the time of the invention. It would have been obvious to form the inserting member and the receiving member from copper since it has been held that one of ordinary skill in the art at the time the invention would choose a suitable and desirable material, because it would be within the general skill of a worker in the art to select a material on the basis of its suitability for the intended use as a matter of obvious design choice (In re Leshin, 227 F.2d 197, 125 USPQ 416 (CCPA 1960)).

Claims 2 & 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sarkar et al. (US 2004/0066102) in view of Iio (US 4886392 supplied by applicant). Sarkar teaches forming an engaging hole in a receiving member, an inserting member that is a base of a rectifying element included in an alternate current power generator and used as an electrode being press-fitted (Paragraph 4) into the engaging hole; and a copper (Paragraph 27) receiving member that is a radiation plate of the rectifying element (Paragraphs 1-4), wherein the engaging hole is formed by punching (Paragraph 27), but it does not teach forming at least one groove in an inner periphery of the receiving member, the inner periphery created by the engaging hole and press-

fitting the inserting member in the engaging hole while releasing an excess into the hole, the inserting member having a higher hardness than the receiving member, or that the inserting member is made of copper. However, Iio teaches forming at least one groove (Fig. 4, #16) in an inner periphery of a receiving member, the inner periphery created by an engaging hole; and press-fitting an inserting member in the engaging hole while releasing an excess into the hole (Col. 4, Lines 45-62), wherein the inserting member has a higher hardness than the receiving member, and copper rectifiers were extremely well known at the time of the invention. It would have been obvious to one of ordinary skill in the art at the time of the invention to install the rectifiers of Sarkar in view of the method as taught by Iio because it provides a press-fitting method that avoids cracking (Iio, Col. 2, Lines 6-19), and to use copper rectifiers because it has been held that one of ordinary skill in the art at the time the invention would choose a suitable and desirable material, because it would be within the general skill of a worker in the art to select a material on the basis of its suitability for the intended use as a matter of obvious design choice (In re Leshin, 227 F.2d 197, 125 USPQ 416 (CCPA 1960)).

Claims 4,6 & 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iio (US 4886392 supplied by applicant) in view of Murukami et al. (US 5032036). Iio teaches the method of claims 3 & 5, but it does not teach that the grooves are slanted off circumference or arranged apart from each other in the circumferential direction. However, Murukami teaches grooves (Figs. 1 & 3, #20) for collecting excess material during a pressing operation that are slanted off circumference and arranged apart from

each other in the circumferential direction (as seen in Figs. 1 & 3). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the grooves of Iio in view of the angled grooves as taught by Murukami because they provide an equivalent and equally well known form for an excess collecting groove. It also would have been obvious to one of ordinary skill in the art at the time of the invention to form the grooves of Iio slanted off circumference and arranged apart from each other in the circumferential direction since it has been held that a change in shape is not considered to be patentably distinct if it does not effect the utility of a device (*In re Dailey*, 357 F.2d 669, 149 USPQ 47 (CCPA 1966)).

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Iio (US 4886392 supplied by applicant) in view of Ross et al. (US 5207525). Iio teaches the method of claim 1, but it does not teach that the grooves forming step forms the groove in a spiral. However, Ross teaches a groove (Fig. 7, #68) for a pressing operation that has the shape of a spiral. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the groove of Iio in view of the spiral groove as taught by Ross because it provide an equivalent and equally well known form for a groove used in pressing. It also would have been obvious to one of ordinary skill in the art at the time of the invention to form the groove of Iio in the form of a spiral since it has been held that a change in shape is not considered to be patentably distinct if it does not effect the utility of a device (*In re Dailey*, 357 F.2d 669, 149 USPQ 47 (CCPA 1966)).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US 4375333, US 4874259, US 5158390, US 5598631 & US 5716156

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Erik D. Preston whose telephone number is (571)272-8393. The examiner can normally be reached on Monday through Friday 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren Schuberg can be reached on (571)272-2044. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

08/25/2006

KARL TAMAI
PRIMARY EXAMINER